

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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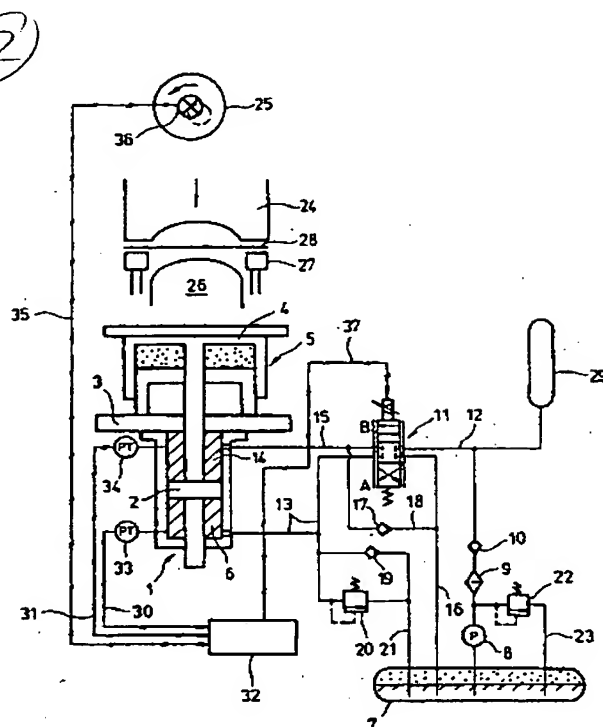
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TITLE : CONTROL METHOD FOR DIE  
CUSHION



**ABSTRACT :** PURPOSE: To reduce noises in a press work by controlling charge and discharge of oil in a hydraulic cylinder with a servo valve to adjust the pressing strength of a cushion pad and controlling the servo valve to drop the cushion pad at a required speed at a position where an upper die comes into contact with a material.

**CONSTITUTION:** A controller 32 detects a position just before the upper die 24 comes in contact with the material 28 to adjust the servo valve 11. The servo valve 11 controls the amount of oil supplied so that the descending speed of the upper die 24 when the upper die 24 comes in contact with the material 28 becomes nearly equal to the descending speed of the cushion pad 4. In this manner, the upper die 24 and a lower die outer 27 gradually clamps the material to prevent impact noises from occurring. After the material is clamped, the drop of the upper die 24 depresses the cushion pad 4 through the lower die outer 27 and the compression of an air cylinder 5 and a lower oil room 6 generates pressing force. At this time, the discharging amount of oil in a lower oil chamber 6 is controlled and adjusted by the servo valve 11 through the controller 32 to obtain a required pressure.

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